COREL PHARMA CHEM

Corel the next generation polymer technologist...

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▸ ACRYPOL®

ACRYPOL® range is a synthetic high molecular weight cross-linked water soluble polymers of acrylic acid, which conform to USP/NF specifications as "Carbomer".
It is available in white free flowing powder, which is soluble in water, alcohol and glycols. Before neutralization, pH of ACRYPOL® solution is between 2.5 to 3.0.

ACRYPOL® range is water soluble polymer used for :
Thickening - To produce wide range of viscosities and flow properties.
Suspending - Insoluble ingredients.
Stabilizing - Emulsions.

Quick Search
- ACRYCOAT®
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Sample request
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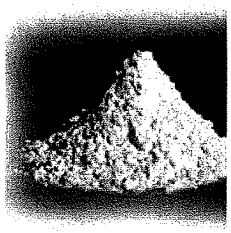
Specification
MSDS
DMF available

grades

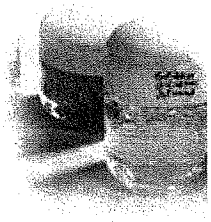
Traditional	Benzene-free	Special
Acrypol 940	Acrypol 980	Acrypol 640NT
Acrypol 941	Acrypol 971	Acrypol 641NT
Acrypol 934	Acrypol 974	Acrypol 674
Acrypol 950	Acrypol 990	Acrypol 676
Acrypol 934P	Acrypol 974P	Acrypol 846
Acrypol 910	Acypol 971P	Acrypol ELT-10
Acrypol 907		Acrypol ELT-20
		Acrypol ELT-20
		Acrypol TR-1
		Acrypol TR-2
		Acrypol ETD2020

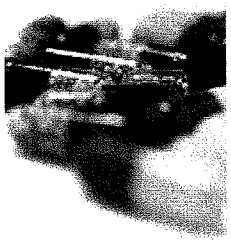
viscosity

Product	% Solution (at pH 7.3-7.8)	Minimum viscosity* (cps)	Maximum viscosity* (cps)	Spindle no.
Acrypol 940 / 980	0.5	40,000	60,000	7
Acrypol 934 / 974	0.5	30,500	39,000	6
Acrypol 934P / 974P	0.5	29,400	39,400	6
Acrypol 941 / 971	0.5	4,000	11,0000	5
Acrypol 950 / 990	0.5	55,000	65,000	7
Acrypol 907	0.5	500	5,000	4
Acrypol 910	0.5	3,000	7,000	5
Acrypol ELT-10**	0.5	45,000	65,000	7



Acrypol ELT-20**	1.0 (at pH 5.8-6.3)	47,000	67,000	7
Acrypol ELT-21**	0.5 (at pH 5.8-6.3)	45,000	65,000	7
Acrypol TR-1	1.0	10,000	26,500	6
Acrypol TR-2	1.0	4,500	13,500	5
Acrypol ETD2020	1.0 (at pH 5.8-6.3)	47,000	77,000	7
Acrypol 674	0.5	5,000	13,000	5
Acrypol 676	0.5	45,000	80,000	7
Acrypol 846	0.5	55,000	65,000	7
Acrypol 640NT	0.5	20,000	30,000	6
Acrypol 641NT	0.5	4,000	8,000	5





* Viscosity of neutralized solutions is measured at 25° C

** The maximum wetting time for Acrypol ELT-10 (0.5 % solution), Acrypol ELT-20 (3.0 % solution) and Acrypol ELT-21 (0.5 % solution) is 8 minute, 10 minute and 6 minute respectively.

ACRYPOL 934 / 974

ACRYPOL 934 polymer is a cross-linked polyacrylicacid, which confirms to USP/NF specifications of "Carbomer". It offers excellent stability at high viscosity and produces thick formulations for opaque gels, emulsions, creams and suspensions. ACRYPOL 934 polymer has short flow properties in aqueous systems. It gives permanent stability at high viscosity.
ACRYPOL 974 is benzene-free grade of ACRYPOL 934.
It is used for thick formulations such as viscous gel, thick emulsions and heavy suspensions for topical preparation, hair care, skin care and moisturizing creams. It is extensively used in the pharmaceutical topical (ointment) formulations.

Features and benefits of ACRYPOL 934/974 polymer are as below:

- Short flow properties
- Medium viscosity
- High suspending ability
- Opaque gel

Recommended Applications:

- Gel, lotion and ointment.
- Suspension and emulsion.
- Topical applications.
- Skin care.
- Hare care.
- Taste masking.

ACRYPOL 934P / 974P

ACRYPOL 934P is a high purity grade of polyacrylicacid, which confirms to USP/NF specifications of "Carbomer". It is specially used in oral care formulations of
pharmaceutical industries.
It can be used in liquid or semi-solid oral dosage forms and also used as thickening, suspending and emulsifying agent. It is used in tablets formulations for binding and sustained release formulations.
ACRYPOL 974P is benzene-free grade of ACRYPOL 934P.

Features and benefits of ACRYPOL 934P/974P polymer are as below:

- Short flow properties
- Medium viscosity
- High suspending ability
- Opaque gel

Recommended Applications:

- Gel, lotion and ointment.
- Oral liquid, suspension and emulsion.
- Sustained release formulation by matrix system.
- Opthalmic gel and eye lotion.
- Transdermal (skin) drug delivery.
- Taste masking.

ACRYPOL 940 / 980

ACRYPOL 940 polymer is a cross-linked polyacrylicacid, which confirms to USP/NF specifications of "Carbomer". It is an extremely efficient rheology modifier capable of providing high viscosity and forms sparkling clear water or hydroalcoholic gels and creams. It is most efficient thickener among all the ACRYPOL grades, having an extremely short flow property. It is suitable for use in making high viscous liquids or gels for cosmetics.
ACRYPOL 980 is benzene-free grade of ACRYPOL 940.
ACRYPOL 940 polymer short flow (non-drip) properties are ideal for applications such as clear gels, hydroalcoholic gels, creams.

Features and benefits of ACRYPOL 940/980 polymer are as below:

- Short flow properties
- High viscosity
- High suspending ability
- High clarity

Recommended Applications:

- Hair styling gels
- Hydroalcoholic gels
- Moisturizing gels
- Bath gels
- Hand, body and face lotions
- Creams
- Tooth paste
- Shampoos
- Room freshner gel
- Hair, skin and moisturizing creams
- Shaving gel and sunscreen lotion.
- After shave lotions

ACRYPOL 941 / 971

ACRYPOL 941 polymer is a cross-linked polyacrylicacid, which confirms to USP/NF specifications of "Carbomer". It gives permanent emulsions and suspensions at low viscosity, even with ionic systems. The gels produced with this polymer have excellent clarity. In ionic systems, it performs better than any of the other ACRYPOL grades.
ACRYPOL 941 polymer is more efficient than ACRYPOL 934 and 940 polymers at low and moderate concentrations.In the hydrogen bonding thickening mechanism, it is more effective than the other ACRYPOL grades.
It is used in cosmetic industries for emulsion stabilization.It is used in solid dosage form as a binder and in sustain- release formulations. Suggested applications include clear gels, hydro-alcoholic gels, and lotions.
ACRYPOL 971 is benzene-free grade of ACRYPOL 941 .
ACRYPOL 971P is a high purity grade of polyacrylicacid, used in oral care formulations of pharmaceutical industries.

ACRYPOL ELT-10

ACRYPOL ELT 10 polymer is a cross-linked polyacrylicacid, which confirms to USP/NF specifications of "Carbomer". It can replace ACRYPOL 940 polymer and ACRYPOL 980 polymer for applications requiring easy processing. It is used in clear gels, hydroalcoholic gels, lotions and creams.

Features and benefits of ACRYPOL ELT-20 polymer are as below:

- Rapid Wetting
- Short flow property
- High viscosity
- High Clarity
- High suspending ability

Recommended Applications:

- Hair styling gels
- Hydroalcoholic gels
- Moisturizing gels
- Hand, body and face lotions
- Bath gels
- Creams
- Sunscreen lotions

ACRYPOL ELT-20

ACRYPOL ELT 20 polymer is a cross-linked polyacrylicacid, which confirms to USP/NF specifications of "Acrylates/C10-30 Alkyl Acrylate Crosspolymer". It is a hydrophobically modified cross-linked acrylate copolymer. This polymer offers many substantial benefits to consmetic industries. ACRYPOL ELT 20 polymer is exceptionally easy to use, self-wets and disperses within minutes. The unique structure of ACRYPOL ELT 20 polymer allows for rapid wetting and improved swelling time without the need for agitation. This processing benefit is offered without compromising the performance.
It also provides electrolyte tolerance and unique sensory benefits in formulations. It can be used in systems with moderate surfactant content, making it an ideal choice for many applications.

Features and benefits of ACRYPOL ELT-20 polymer are as below:

- Rapid Wetting
- Long flow property
- Effectively across a broad pH range
- Efficient Thickening
- Excellent Clarity
- Excellent Electrolyte Tolerance
- Stability of Ingredients in Surfactant-Containing Formulations

Recommended Applications:

- Shampoos
- Lotions
- Body washes
- Hair and skin gels
- Bath gels
- Creams

ACRYPOL ELT-21

ACRYPOL ELT 21 polymer is a cross-linked polyacrylicacid, which confirms to USP/NF specifications of "Acrylates/C10-30 Alkyl Acrylate Crosspolymer". It is a hydrophobically modified cross-linked acrylate copolymer, and is designed to efficiently impart thickening, stabilizing, and suspending properties to a variety of personal care applications. The polymer incorporates patented technology, which allows it to quickly and easily self-wet. In many applications ACRYPOL ELT 21 polymer is more efficient than other ACRYPOL grades.

Features and benefits of ACRYPOL ELT-20 polymer are as below:

- Rapid Wetting
- Short flow property
- Effectively across a broad pH range
- Excellent Clarity
- Improved Electrolyte Tolerance
- High thickening efficiency
- Superior aesthetic performance

Recommended Applications:

- Hair styling gels
- Hand, body and face lotions
- Hand sanitizers
- Moisturizing gels
- Shampoos
- Ethnic hair lotions

ACRYPOL ETD2020

ACRYPOL ETD 2020 polymer is a cross-linked polyacrylicacid, which confirms to USP/NF specifications of "Acrylates/C10-30 Alkyl Acrylate Crosspolymer". It is specially designed for thickening surfactant systems. It delivers excellent thickening efficiency and suspending capability, long viscous flow and sparkling clarity in gel systems.
It is specifically designed to make dispersions in water less susceptible to lumping and easier to pump and handle due to its low dispersion viscosity before neutralization. Aqueous dispersions of ACRYPOL ETD 2020 are, therefore, easier to prepare at higher polymer solids.

Features and benefits of ACRYPOL ELT-20 polymer are as below:

- Rapid Wetting
- Long viscous flow property
- Efficient Thickening
- Sparkling Clarity
- Easy to disperse
- Suspending capability

Recommended Applications:

- Clear gels
- Hydro-alcoholic gels
- Hand sanitizers
- Cleaning products
- Shampoos
- High electrolyte systems

ACRYPOL TR-1

ACRYPOL TR-1 polymeric emulsifiers are high molecular weight, cross linked copolymers of acrylic acid and a hydrophobic comonomer. They stabilize oil-in-water emulsions, where the lipophilic (hydrophobic) portion of the polymer adsorbs at the oil-water interface, and the hydrophilic portion swells in the water forming a gel network around oil droplets to provide exceptional emulsion stability to a broad range of oils. They are used as stabilizers of oil-in-water systems, with up to 20% oil loading possible at typical use levels of 0.2 to 0.4%.
ACRYPOL TR-1 polymeric emulsifier a versatile polymer which can emulsify up to 30% oil by weight, within a pH range of 4 to 5.5 and up to 20% oil over the pH range of 3 to 11.
While ACRYPOL TR-1 polymeric emulsifier thickens water, ACRYPOL polymers should be used with ACRYPOL TR-1 polymeric emulsifier to provide greater thickening properties where higher viscosity emulsions are required.

ACRYPOL TR-2

ACRYPOL TR-2 polymeric emulsifiers are high molecular weight, cross linked copolymers of acrylic acid and a hydrophobic comonomer. They stabilize oil-in-water emulsions, where the lipophilic (hydrophobic) portion of the polymer adsorbs at the oil-water interface, and the hydrophilic portion swells in the water forming a gel network around oil droplets to provide exceptional emulsion stability to a broad range of oils.
They are used as stabilizers of oil-in-water systems, with up to 60% oil loading possible at typical use levels of 0.15 to 0.3%.
ACRYPOL TR-2 polymeric emulsifier contains the higher level of hydrophobic groups and can emulsify the highest levels of oil (up to 60% by weight) within a pH range of
4 to 5.
ACRYPOL TR-2 polymeric emulsifier is highly effective at levels below 0.4%, providing a low-viscosity emulsion particularly suitable for applications via spray mechanism.

advantages

Thickening efficiency
High viscosities at low concentrations.
Uniform performance
Carbomer gives uniform viscosity performance, while natural gums can not give the same.
Safety
Years of successful use of carbomers.
Temperature stability
There is no significant effect of temperature on viscosity performance.
Unaffected by aging
Excellent shelf life.
Microbial resistance
Resists bacterial attack and does not support mold growth.
Versatility
Although primarily used in aqueous systems with neutralization. It can also be used in solvent systems, with or without neutralization.
Elegance
Smooth and luxurious feeling.

neutralizer

The recommended neutralizers for Acrypol range are:

- Sodium hydroxide
- Pottasium hydroxide
- Triethanol amine
- Triethyl amine
- Ammonium solution
- Di-iso-propanolamine
- Di-(2-ethylhexyl) amine

toxicity

ACRYPOL® range is a high molecular weight polymer. It is not absorbed by body tissues and is totally safe for human oral consumption. Test for toxicological tolerance show that it does not have any pronounced, physiological action and is non-toxic.

storage

Store in cool and dry place. Keep away from moisture and water.

self life

Minimum 5 years from manufacturing date.

packing

5 kgs, 20 kgs; net in corrugated box with polyethylene liner.

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